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US Fish & Wildlife Service - Journal Entry

Are They Safe to Eat? Fish Sampling at Hanford Reach National Monument

Region 1, October 20, 2005



Environmental Contaminants Specialist Lindsey Hayes and Water Quality Technician Jason Clayton measured, weighed, and processed bass for contaminants analysis. Photos: Ron Crouse/USFWS, Hanford Reach National Monument 10/10/2005

A cooperative research effort between the Ecological Services (ES) and Refuges arms of the U. S. Fish and Wildlife Service and the U.S. Bureau of Reclamation (BOR) is attempting to establish whether irrigation drainwater has caused, or has the potential to cause, significant harm to human health, fish and wildlife, or could adversely affect the suitability of water for other beneficial uses on the Saddle Mountain National Wildlife Refuge/Hanford Reach National Monument (Monument) and the Columbia National

Wildlife Refuge (CNWR). Sampling surveys were recently conducted at Saddle Mountain Lakes and the White Bluffs 10 (WB-10) ponds on the Monument, and at Royal Lake on the CNWR, in addition to selected waters throughout Central and Eastern Washington.

The Columbia Basin Project (CBP), managed by the BOR, was developed in the early 1930's to provide irrigation water to the fertile but arid lands of the Columbia River basin in Central Washington. Project water originates from the Columbia River's Lake Roosevelt, the reservoir formed behind Grand Coulee Dam. Lake Roosevelt is currently being investigated by the Environmental Protection Agency (EPA) based on potential contaminants associated with mining, smelting, pulp mills, and other sources. The Saddle Mountain Lakes and the WB-10 Ponds are at the terminal ends of the drainage system as it empties into the Columbia River. During 2005, a total of 120 fish will be collected from 12 sites within the CBP, including three sites on Refuge lands, to test for elevated metal and pesticide concentrations. Sampling biota from water bodies in the system, above and below the Refuges, aids in determining areas where increased contaminant loading is occurring.

As part of a cooperative effort with the BOR, the Service's Upper Columbia Fish and Wildlife Office (UCFWO), the Monument, and the CNWR are participating in the CBP-wide sampling effort to evaluate and analyze fish tissues for hazardous organochlorine pesticides, Polychlorinated Biphenols (PCBs), and heavy metals. UCFWO's Resource Contaminants Specialist Toni Davidson is supervising the project. After four days of fishing effort, a total of thirty fish, fifteen common carp and fifteen bass, were collected from Royal Lake, Saddle Mountain Lakes and the WB-10 Ponds for chemical analysis. Staff from the Monument, UCFWO, BOR, South Columbia Basin Irrigation District, CNWR, and Washington Department of Fish and Wildlife assisted with the fish collection.

The fish were weighed and length measurements taken, bass were filleted, and all fish were tagged and frozen. Fish carcasses were preserved for future analysis, if warranted. Data sheets were



Resource Contaminants Specialist Toni Davidson supervised the project and sampled scales from each fish, recording them for future analysis. Photos: Ron Crouse/USFWS, Hanford Reach National Monument 10/10/2005

completed for all fish and samples were tagged with information identifying sample site, sample number, date, and species. Fish were processed using EPA methods for sampling and analysis. Once fish are collected from all 12 designated sites within the CBP, the samples will be sent to selected labs for analysis, with analytical results expected early in 2006. Bass and carp were also submitted to the Department of Energy (DOE) for gamma (muscle), Sr-90, U and Pu analysis (carcass).

Data collected relating to the irrigation return waters on the Monument and CNWR will be used to evaluate the potential hazards to the environment and to humans from fish consumption. Depending upon the study results, additional sampling may be required, and the appropriate agency will take action, including the potential for issuing a human health advisory if warranted.

"Ecological Services, Refuges, BOR, DOE, and WDFW accomplished this project by focusing on common goals to protect human health and the environment." says Greg Hughes, Monument Project Leader. "This effort displays inter-and intra-agency coordination at it's best."

To view past ARS Reports and other news from Hanford Reach National Monument visit: <http://www.fws.gov/hanfordreach/news.html>

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